



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS TX 75202-2733

MAR 18 2014

Ms. L'Oreal Stepney, P.E., Deputy Director
Office of Water (MC-122)
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, TX 78711-3087

Re: Approval of site-specific water quality criteria Phillips Ditch and Santa Anna Bayou
(tributaries to segment 1005 – Houston Ship Channel/San Jacinto River Tidal)

Dear Ms. Stepney:

The Environmental Protection Agency (EPA) has completed its review of the Texas Commission on Environmental Quality's (TCEQ) request for approval of a site-specific aluminum criterion (freshwater) and site-specific zinc criteria (saltwater), which were developed by the Akzo Nobel Functional Chemical Company. Since the facility discharges to a freshwater ditch within three miles of a tidal water body, both freshwater and saltwater aquatic life criteria in Table 1 of the *Texas Surface Water Quality Standards* (TSWQS) are evaluated for wastewater permitting.

As required by 40 CFR §131.20, the request for approval of the aluminum criterion was originally submitted to EPA for technical review in August 2012. In response to the original request, EPA informed the TCEQ that the site-specific criterion for aluminum was technically-approvable. However, EPA could not take a formal approval action on the aluminum criterion under the Clean Water Act (CWA) at that time, as the public participation requirements found at 40 CFR Part 25 had not been fulfilled for the site-specific water quality standards revision. In fall 2013, the facility developed site-specific zinc criteria, and EPA completed its technical review of this study. TCEQ completed the public participation requirements through the public notice on the proposed permit for the Akzo Nobel Functional Chemical Company's Pollutant Discharge Elimination System Permit #04119 (NPDES TX0006688). No comments were received on the site-specific aluminum criterion or the site-specific zinc criteria.


The site-specific aluminum criterion applies to a portion of Phillips Ditch. Phillips Ditch is a tributary to Santa Anna Bayou, within segment 1005 of the Houston Ship Channel. The completed study resulted in a water effect ratio (WER) of 3.93 (measured as total aluminum). Multiplying the WER by the statewide freshwater acute criterion resulted in a site-specific acute criterion of 3,895 ug/L. Based on our review of the study, this criterion has been demonstrated to protect aquatic life and is approved for CWA purposes. The site-specific aluminum criterion applies at the point of discharge from outfall 001. This criterion has been incorporated into Appendix E of the 2014 TSWQS. The statewide aluminum acute criterion in Table 1 of the TSWQS applies to the remaining area of Phillips Ditch. The TSWQS do not contain a freshwater chronic criterion for aluminum and EPA has not published recommended aluminum criteria for protection of saltwater organisms, thus only the freshwater acute site-specific criterion was derived.

The site-specific zinc criteria apply to a portion of Santa Anna Bayou. The completed study resulted in WERs of 1.82 (measured as total zinc) and 1.05 (measured as dissolved zinc). Multiplying the dissolved zinc WER by the statewide saltwater criteria resulted in site-specific criteria of 97.3 ug/L (acute) and 88.4 ug/L (chronic). Based on our review of the study, these criteria have been demonstrated to protect aquatic life and are approved for CWA purposes. The WER based on total zinc measurements may be used for permitting purposes. In this case, the process for translating dissolved metals criteria to total recoverable effluent limits should not be used, as the WER for total zinc accounts for this consideration. The site-specific zinc criteria only apply at the edge of the mixing zone from outfall 001 and will be incorporated into Appendix E of the TSWQS at the time of the next triennial revision. The statewide zinc criteria in Table 1 of the TSWQS apply to the remaining areas of Santa Anna Bayou and the presumed high aquatic life use for this water body has not been revised. The freshwater zinc criteria from Table 1 of the TSWQS are applicable to Phillips Ditch.

The Endangered Species Act §7 states that "all Federal agencies shall...utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered and threatened species" and "each Federal agency shall insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered or threatened species." EPA has determined that approval of the site-specific aluminum and zinc criteria will have no effect on federally-listed threatened and endangered species or on critical habitat.

If you should have any questions, please call me at (214) 665-7101 or have your staff contact Diane Evans at (214) 665-6677.

Sincerely,


William K. Honker, P.E.
Director
Water Quality Protection Division

cc: Mike Pfeil, TCEQ – Water Quality Assessment Section (MC-150)
Monica Vallin-Baez, TCEQ – Wastewater Permitting Section (MC-148)
Debbie Miller, TCEQ - Water Quality Standards Group (MC-234)